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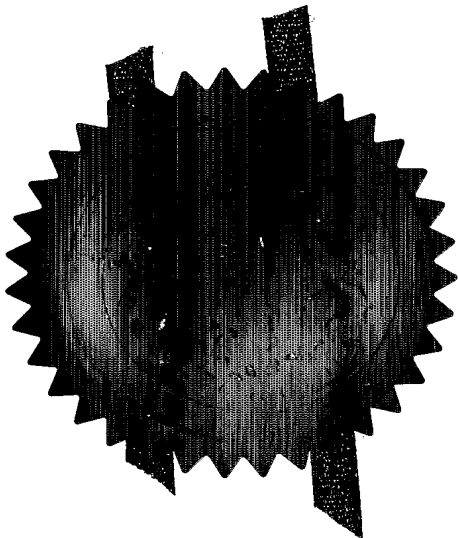
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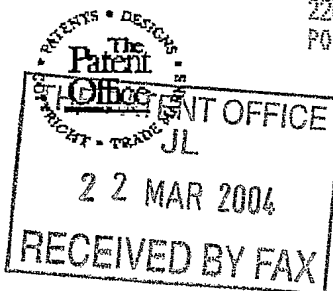
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IAM/EMW/P/26154.GB

2. Patent application number
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0406313.7

22 MAR 2004

3. Full name, address and postcode of the or of each applicant (underline all surnames)

MR MUMTAZ SHAH,
96 Newport Road,
Chorlton Cum Hardy,
Manchester
M21 9WN

Patents ADP number (if you know it)

If the applicant is a corporate body, give the country/state of its incorporation

4372645002

4. Title of the invention

CUTTER APPARATUS

5. Name of your agent (if you have one)

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

WILSON GUNN M'CAW
5th Floor, Blackfriars House,
The Parsonage,
Manchester M3 2JA
UNITED KINGDOM

Patents ADP number (if you know it)

7153927001

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Country

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7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

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Description

4

Claim (s)

Abstract

Drawing (s)

171

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11. I/We request the grant of a patent on the basis of this application.

Signature

Andrew Green M. Green

Date _____

22/03/2004

12. Name and daytime telephone number of person to contact in the United Kingdom Ian A. Middlemist 0161 827 9400

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CUTTER APPARATUS

This invention relates to a cutter apparatus for use in cutting sheet material such as paper, cloth or plastics such as PVC etc.

5 In WO 98/48981 I have disclosed apparatus for cutting sheet material which comprises a hand-manoeuvrable body comprising separate superimposed upper and lower parts with a gap between wherein sheet material can be received. The parts are physically connected only by a blade, or combination of blade and blade holders, and a pressure means in
10 the form of a freely rotatable wheel is provided to tension the sheet in front of the blade. The gap may be sinusoidal, by forming the facing surfaces of the upper and lower parts with suitable contours for support and tensioning of the sheet, and a window or other viewing means is provided for viewing the sheet in front of the blade.

15 It has been found that the capabilities of this early model of sheet cutting apparatus are limited in some respects. Whilst cuts can be made to follow curved lines and in particular, the use of a wheel as a pressure means in front of the blade tends to limit the radius of curvature attainable and the minimum width of cut of material and impose a minimum radius of curvature
20 for clean, snag-free cutting by the blade.

It is an object of the invention to provide a cutter apparatus for use in cutting sheet material such as paper cloth or plastics which has improved flexibility in use, for example attaining shorter radius curvature of clean snag-free cutting, and improved capabilities in other respects such as accuracy of
25 tracking.

According to the invention, cutter apparatus comprises, an upper part and a lower part, a blade extending between the parts and forming the sole

connection between the parts and provided with a leading edge cutting edge, the upper part comprising a body adapted for manual manipulation, and the lower part providing opposed surfaces, a lower gliding surface and an upper paper guide surface for guiding paper between the parts and presenting the paper to the blade for cutting.

The apparatus preferably provides tensioning means in a zone around the blade, at least in front of and preferably to each side and extending behind the blade, in the form of protrusions on either the upper or lower parts of the apparatus. The protrusions are preferably provided one to each side of the blade and may be contoured to guide the paper by means of a curved lead-in surface. The pressure acting on the tensioning means may vary in response to changes in pressure exerted by a user on the upper part of the apparatus.

The lower part of the apparatus may be provided with notches or channels for cooperating with a rule or straight edge to guide the cutter apparatus for example for edge trimming.

A preferred embodiment of cutter apparatus according to the invention will now be described with reference to the accompanying drawings, wherein:-

Fig. 1 is a side elevation view of cutter apparatus according to the invention;

Fig. 2 is a front elevation of the apparatus shown in Fig. 1; and

Fig. 3 is a perspective view of the cutter apparatus of Figs. 1 and 2.

The cutter apparatus according to the invention shown in the drawings comprises an upper body 10, and a lower shoe 11 which are separated by a gap 12, and connected by a blade and holder combination 13 which has an upper end secured in the upper body 10 and a lower end

secured in the lower shoe 11. The upper body 10 comprises a plastics shell which is hollow but can be filled or partially filled, having a transparent window 14 or other viewing means in the front thereof, and the shell is shaped in a manner similar to an egg to be comfortably placed under the
5 palm of a user's hand.

The blade/holder combination 13 features a cutting edge 15 at the leading edger of the blade.

The upper body 10 has a base part 16 which provides an upper guide surface bounding the gap 12, whilst the upper face of the shoe 11 provides
10 a lower guide surface bounding the gap 12. The upper body may comprise a separately moulded cover part which is joined to the base part 16 to form the body 10.

The upper guide surface of the base part 16 is formed with tensioning means which takes the form of a protrusion 17, 18 to either side of and in
15 front of the blade/holder combination 13, so that paper presented to the gap 12 to pass between the body 10 and shoe 11 is tensioned in the zone immediately in front of the cutting edge 15 as the cutter is pushed by hand to the right in Fig. 1, thereby bringing the paper under tension to the edge
20 15 and thus ensuring a clean cut. The protrusion can also be a part or more than one part placed around the blade, in front thereof and to each side and extending behind the latter.

The shoe 11 is formed with downwardly open notches 19, 20 to the front, one to each side of the centre line (or blade locus) of the cutter, which enable a rule or other straight edge to be inserted below the shoe 11, to
25 guide the cutter as it is moved forward of a straight cut, for example in edge-trimming sheets, if required.

The cutter can also be used free-hand for making curved cuts, for example for use in cutting out to a pattern following pre-drawn lines. The window 14 helps with this as the precise alignment of the blade can be followed visually so that the path of the cutter can be manually adjusted by the user to follow a pre-drawn line.

The shoe 11 provides an under surface, either as a continuous under surface (save for the notches 19, 20) or as the lower edges of a peripheral skirt and is of general horse-shoe shape (best indicated in Fig. 3), although it can be of a semi-elliptical or oval shape or any other shape, which under surface provides a low resistance so that the shoe can be conveniently slid on a drawing board, desk or table surface below the paper, to move the cutter in response to control movements of the user manipulating the upper body 10.

The pressure exerted by the user may act to vary the tension exerted by the protrusions 17, 18 and the latter present a curved leading edge (see Fig. 1) for guiding the paper into the gap 12 towards the cutting blade edge 15 without snagging of the paper.

As the blade edge 15 is within the cutter with only a narrow gap between the parts 10, 11 and thus not accessible to fingers, the cutter is safe to use even for children.

It is of course to be understood that the invention is not intended to be restricted to the details of the above embodiments which are described by way of example only.

Fig. 1

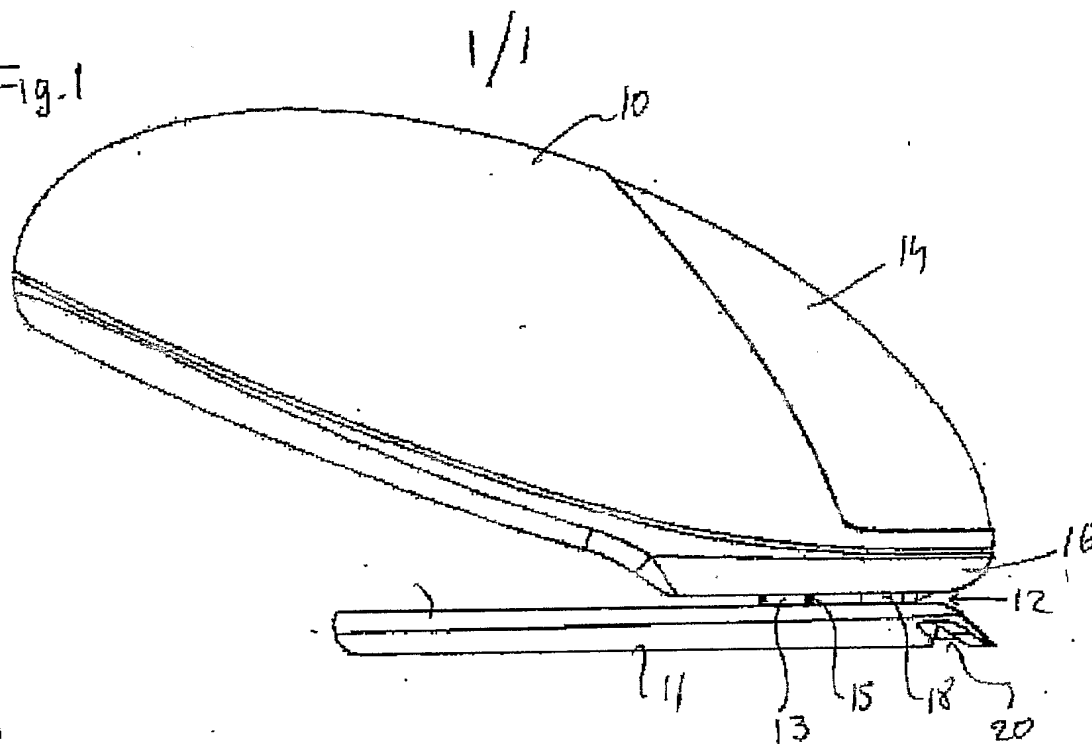


Fig. 2

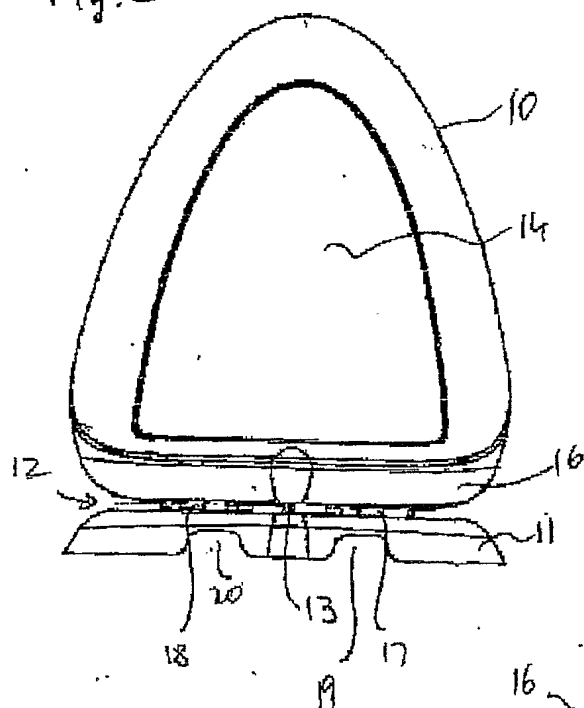
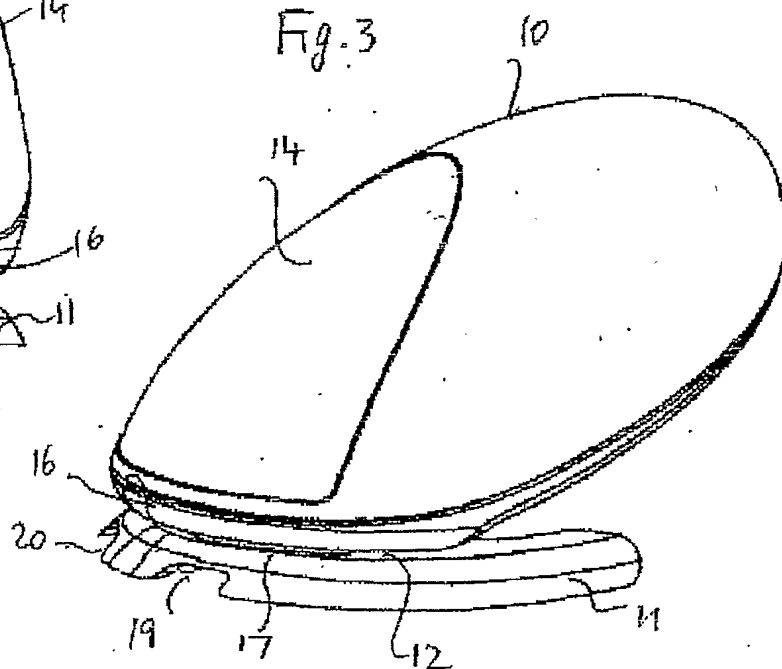


Fig. 3



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